IN THE CLAIMS:

1. (previously presented): In a method for obtaining viable chondrocytes capable of being used for transplantation comprising surgically obtaining cartilaginous tissue from the knee, nose or ankle and obtaining chondrocytes from said tissue wherein said chondrocytes are capable of being used for cell transplantation or for the preparation of chondrocyte containing scaffolds.

2. (previously presented): A method of producing abundant quantities of good quality chondrocytes comprising expanding said chondrocytes in spin culture and then culturing said chondrocytes in a controlled strain apparatus, thereby obtaining abundant quantities of good quality chondrocytes.

3. (previously presented): Chondrocytes or cells capable of becoming chondrocytes cultured on specially prepared chitosan containing scaffolds.

4. (previously presented): A polymer composition useful for preparing a scaffold comprising a gel prepared from the reaction of dialdehyde arabinogalactan and chitosan.

5. (previously presented): A method of surgical repair using chondrocytes comprising the steps of (a) obtaining cartilage from the knee, nose or ankle (b) separating chondrocytes from said cartilage, (c) culturing said chondrocytes on microcarriers under spin-culture conditions to enhance integrin expression.

6. (previously presented): The method of surgical repair of claim 5 wherein the chondrocytes are cultured on collagen microcarriers.

7. (previously presented): The method of surgical repair of claim 5 wherein the chondrocytes are expanded on microcarriers in suspension culture and then subjected to cyclic strain in order to cause the increased synthesis of β_1 integrin in chondrocytes and thereby produce chondrocytes which are more effective for use in cartilage repair.

8. (previously presented): The surgical method of claim 5 further comprising separating the chondrocytes form the microcarrier and culture in the chondrocytes on a chitosan scaffold which can be used for cartilage repair.

9. (previously presented): The surgical method of claim 5 further comprising separating the chondrocytes form the microcarrier and culturing the chondrocytes on an arabinogalactan-chitosan polymer scaffold which can be used for cartilage repair.

10. (previously presented): A tissue-engineered replacement body part for a patient, wherein the cells from which the body part have been grown, at least initially in the laboratory, are from cells of a sample obtained from tissue of the patient, and wherein the said cells of the body part have been grown in suspension culture on microcarriers in a low oxygen concentration environment.

11. (previously presented): The tissue-engineered replacement body part of claim 10, further including a biodegradable scaffolding for preparing the body part.

12. (previously presented): The tissue-engineered replacement body part of claim 11, wherein a sample tissue to obtain the cells are taken from the patient's nasal septum.

13. (previously presented): A tissue-engineered replacement body part for a patient, wherein the cells to prepare the body part have been grown at least initially in the laboratory from a sample tissue obtained from the patient's nasal septum.

14. (previously presented): The tissue-engineered replacement body part of claim 13, wherein the part is a replacement for cartilage.

15. (previously presented): The tissue-engineered replacement body part of claim 14, further including a biodegradable polymer scaffolding for preparing the replacement cartilage.

16. (previously presented): The tissue-engineered replacement body part of claim 15, wherein the cells for producing the body part have been grown in a suspension culture.

17. (previously presented): The tissue-engineered replacement body part of claim 16, wherein the cells of the body part have also been grown in an environment of reduced oxygen.

18. (canceled).

19. (canceled).

20. (canceled).

21. (canceled).

22. (previously presented): A method of surgical repair employing cells capable of becoming chondrocytes comprising culturing said cells on microcarries under suspension culture to enhance integrin expression.

23. (previously presented): The method of surgical repair wherein chondrocytes or cells capable of becoming chondrocytes are expended on microcaries in suspension culture and then subjected to cylic strain in order to cause the increased synthesis of β, integrin and to make said chondrocytes or cells capable of becoming chondrocytes more effective for use in cartilage repair.

Respectfully submitted,

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Date

Sam Rosen
Reg. No. 37,991
Attorney for Applicant

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By: Judy Robertson

ARMSTRONG, WESTERMAN & HATTORI, LLP
502 Washington Avenue, Suite 220
Towson, MD 21204
Telephone: (410) 337-2295
Fax: (410) 337-2296

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